Course Title:
Fuel Injection Principles

Catalog Description:
Fuel Injection Principles explains and demonstrates diesel engine operation with fuel systems, the basic repair and rebuilding of injectors and timing of the fuel system to the engine.

Prerequisites or Necessary Entry Skills/Knowledge:
None

Fulfills Mn Transfer Curriculum Area(s)
Goal 1: Communication: ____ by meeting the following competencies:
Goal 2: Critical Thinking: ____ by meeting the following competencies:
Goal 3: Natural Sciences: ____ by meeting the following competencies:
Goal 4: Mathematics/Logical Reasoning: ____ by meeting the following competencies:
Goal 5: History and the Social and Behavioral Sciences: ____ by meeting the following competencies:
Goal 6: The Humanities and Fine Arts: ____ by meeting the following competencies:
Goal 7: Human Diversity: ____ by meeting the following competencies:
Goal 8: Global Perspective: ____ by meeting the following competencies:
Goal 9: Ethical and Civic Responsibility: ____ by meeting the following competencies:
Goal 10: People and the Environment: ____ by meeting the following competencies:
**Topics to be Covered**

- Combustion chambers
- Injectors
- Engine timing
- Fuel delivery

**Student Learning Outcomes**

- Demonstrate injector test procedures
- Reassemble and adjust injectors to manufacture specifications
- Set and adjust timing on engines
- Clean and repair injectors
- Discuss combustion
- Analyze the operation of an injector using a tester and identify repair necessary
- Explain the effect on performance of an engine dependent on operation
- Reference the stages of combustion and burning of fuel
- Describe combustion chamber designs
- Operate injectors

**Is this course part of a transfer pathway:** Yes ☐ No ☒

Revised Date: 8/2021